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USSN 09/769,405
Art unit 3679
Examiner J.R. Schiffman

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PATENT
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

MAIL STOP - APPEAL BRIEF - PATENTS

Assistant Commissioner for Patents
Washington, D.C.
U.S.A. 20231

Submission of Appeal Brief Filed Under 37 C.F.R. 1.192

RE: Application Serial No.: 09/769,405
Applicant: Arthur W. Lauder
Title: Rod Coupling
Filed: January 26, 2001
Art Unit: 3679
Examiner: J.R. Schiffman
Attorney Docket No.: 143-3US

Applicant herewith encloses an appeal brief in triplicate, along with a cheque in the amount of US\$165.00 for the required fee as set out in 37 C.F.R. 1.17(c). Please charge any further amounts required to deposit account no. 12-0434. A duplicate copy of this sheet is enclosed.

Respectfully submitted and signed on:

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PATENT
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPEAL BRIEF FILED UNDER 37 CFR 1.192

February 12, 2004

BY COURIER

Assistant Commissioner for Patents
Washington, D.C., U.S.A. 20231

Dear Sir:

RE: Patent Application No. 09/769,405
Filing Date: January 26, 2001
Inventor: Arthur W. Lauder
Title: Rod Coupling
Group Art Unit: 3679
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1. INTRODUCTION

This is an appeal to the Board of Appeals and Interferences from the decision dated November 17, 2003, of the examiner finally rejecting claims 1-12. This application was the subject of an earlier appeal, the brief for which was filed April 28, 2003. In that appeal, the applicant argued against the rejection of claims 1, 2, and 4-11 under 35 U.S.C. 103(a) as being unpatentable over Silva (US 4,168,393) in view of Bair (US 4,668,117) and the rejection of claims 3 and 12 under U.S.C. 103(a) as being unpatentable over Silva in view of Bair and further in view of Edge (US 272,033). The examiner withdrew the rejection on those grounds, but conducted a further search to once again reject the claims in an Office Action dated May 28, 2003. The applicant's argument against that rejection was not persuasive, leading to the present appeal.

2. REAL PARTY IN INTEREST

The invention has been assigned to Plainsman Mfg. Inc. of Edmonton, Alberta, Canada, which is the real party in interest.

3. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

4. STATUS OF CLAIMS

Claims 1-12 have been finally rejected, and it is this final rejection that is being appealed.

5. STATUS OF AMENDMENTS

There are no amendments pending in this appeal.

6. SUMMARY OF INVENTION

As set out in the claims, the invention is directed to a rod coupling, comprising:

a tubular housing having a first end adapted for threaded connection to a rod in a downhole rod string and a second end adapted for threaded connection to a rod in a downhole rod string, the tubular housing having an interior surface defining a bore extending along the tubular housing from the first end to the second end, the tubular housing having an exterior surface (page 2, line 25- page 3, line 2);

plural openings extending transversely through the housing from the interior surface to the exterior surface (page 3, lines 3-6, lines 13-20); and

a coating on the exterior surface of the tubular housing and covering the plural openings (page 3, lines 8-12).

The applicant submits that the coating as applied by the applicant's invention represents an improvement over the prior art that relied on various methods of modifying the exterior surface only of the rod coupling.

The invention also provides for a drill string made up of a plurality of sucker rods joined by a plurality of rod couplings as shown in the applicant's disclosure (page 3, lines 24-29).

7. GROUPING OF CLAIMS

The following groups of claims are argued separately: Claims 1, 2 and 4-11 and Claims 3 and 12. The feature of claims 3 and 12 that the coating extends through the openings to form knobs is argued separately.

8. THE REFERENCES

The following references are relied on by the examiner:

Edge	US 272,033	Feb. 13, 1883
Beurer	US 3,950,017	Apr. 13, 1976
Bair	US 4,668,117	May 26, 1987

9. BRIEF DESCRIPTION OF THE REFERENCES

Edge is directed to a method of inlaid work whereby a perforated plate is mounted on top of another plate, preferably of some plastic material, and then both parts are exposed to a die that forces material from the lower plate through the perforations of the upper plate. Depending on the degree of force applied, knobs may form on the surface of the upper plate. Depending on the desired effect, these knobs may be filed down flush with the surface of the upper plate.

Beurer "relates to the joining together of tubing of dissimilar materials in a leakproof connection and more particularly to the joining of a thermoplastic tube and a metal tube" (Col. 1, lines 10-13). As taught by Beurer, this leakproof connection is achieved between the tubes by "encapsulating both tubes within a cast polyurethane block 20, the block having portions passing through holes 18 in the polyethylene tube and also a portion filling the annular space between the outer surface of tube 10 and the inner surface of tube 12" (Col. 2, lines 15-23).

Bair teaches a rod coupling with a mounted guide, the rod guide comprising "(a) an axially elongated coupling section having threads at axially opposite ends thereof for coupling to and between successive sucker rods in the string, to transmit string loading, (b) a rod guide extending about and bonded to said section to project outwardly therefrom, for engagement with the well bore

during up and down stroking of the string" (Col.1, lines 33-41). The guide itself "may consist of molded plastic material... such plastic most preferably consist[s] of urethane or polyurethane" (Col. 1, lines 45-50). The guide is connected to the coupling section by means of at least one tongue and groove connection, and typically two at opposite ends of the guide (Col. 2, lines 40-44). The major object of the invention is to meet the need "for guides which are easily and quickly removed and replaced, and which do not become detached from the string during the most adverse stroking conditions, as for example when the well deviates radically from vertical" (Col. 1, lines 21-25).

10. THE REJECTION

All the claims stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bair in view of Beurer or Beurer and Edge. The examiner suggests that Bair, as combined with either Beurer or Beurer and Edge, renders the applicant's invention obvious to one of ordinary skill in the art. According to the examiner, Bair discloses "a rod coupling comprising a tubular housing 10 having a first end adapted for a threaded connection 11 to a rod in a downhole rod string and a second end adapted for a threaded connection to a rod in a downhole rod string, the tubular housing having an exterior surface with a coating 15" (page 2, Paper 12). The examiner combines Bair with Beurer to reject claims 1, 2, and 4-11, and further with Edge to reject claims 3 and 12.

The applicant submits that the examiner's combination of Bair with either reference is utterly lacking in motivation, in part because the references are completely non-analogous, and in part because they teach away from each other. As such, no one skilled in the art would look from one to either of the others to combine them. Therefore, the applicant submits that the examiner has failed to make out a *prima facie* case of obviousness.

11. ARGUMENT

I. Summary of the Law

Generally, a rejection of the claims under 35 U.S.C. § 103(a) must meet the requirements as set out by the Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), where the Court stated:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy. . .

To determine obviousness, therefore, the examiner must consider four key elements outlined by the Supreme Court in its decision, and summarized in the *Manual of Patent Examining Procedure (MPEP) Edition 8 (E8)*, August, 2001, Latest Revision February 2003, s. 2141. They are as follows:

- (A) Determining the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations.

It will be argued and demonstrated that the examiner has failed to determine correctly the scope and contents of the prior art and also to assess properly the differences between the references and the claimed invention, and therefore has come to an erroneous rejection of the claims under 35 U.S.C. 103(a).

More specifically, it is submitted that the examiner's rejection of the invention, based on the combination of features from different references, is in error, and that the examiner has failed to meet the necessity as described by the Court in *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992) at 1447 where it noted:

We have reminded ourselves and the PTO that it is necessary to consider "the reality of the circumstances", *In re Wood*, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979) -- in other words, common sense -- in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.

It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments. The combination of elements from nonanalogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge cannot come from the applicant's invention itself.

The applicant submits that the examiner has engaged in impermissible hindsight analysis to reject the applicant's invention. Furthermore, the examiner's lack of "common sense" led to his failure to establish a *prima facie* case of obviousness where the requirements, as summarized in MPEP, s. 2143, are as follows:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Because of the examiner's failure, the rejection of the claims must be set aside.

II. The Rejection of Claims 1, 2 and 4-11 Based on Bair in View of Beurer

The examiner's rejection of claims 1, 2, and 4-11 based on Bair in view of Beurer is wrong. The examiner has combined references without regard to the "reality of the circumstances". While Bair is directed to a similar problem as that of the Applicant, it solves that problem in a different way, and would not suggest on its own any need to look for another solution. As a result, the examiner has chosen to combine Bair with Beurer. This combination is wrong because of the lack of analogy between the two references, and because they also are lacking in any motivation or teaching to be combined as the examiner suggests. On the contrary, their combination would result in something that is unworkable.

First of all, Beurer is not analogous with Bair, and therefore not analogous with the applicant's invention. As noted in *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992) at 1447, "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." The Court was addressing itself to the question of analogous art, and in this context, a reference not within the field of the applicant's endeavor and not reasonably pertinent to the particular problem with which the applicant is concerned can be considered non-analogous.

Beurer is directed to the art of forming a leakproof connection, and more specifically, such a connection between tubing made of dissimilar materials. Neither Bair nor the applicant's invention have any concern with leakproof connections. Both inventions are concerned with

mounting a guide on a rod coupling, and modifications to the rod coupling are made only to achieve that end. The manner of securing two sucker rods together through box and pin ends is, as noted by the applicant on page 2, line 28, well-known in the art.

The examiner notes that "the motivation for the combination of Bair and Beurer [comes] from the specific teaching from Beurer in col. 2, l. 15-23 of the disclosure" (page 4, paper 12). However, Beurer here is discussing a leakproof connection between two pieces of tubing. This is completely irrelevant to mounting a guide on a rod coupling. To extend the analogy between the two references, Bair's rod sections 12 and 14 would be analogous to Beurer's tubes 10 and 12, and Bair's coupling section 10 would be analogous to Beurer's polyurethane block 20. One skilled in the art would look at this analogy, see nowhere any useful teaching in Beurer regarding improving Bair's guide 15 for which Beurer has no analogue, and reject Beurer as useless.

Moreover, there is no motivation to combine Bair with Beurer because Bair already has a solution to mounting a guide on a rod coupling. To arrive at the applicant's invention, the additional steps of creating a bore in the coupling and then drilling holes through the bore would be required. Modified Bair would then have a tongue and groove connection between the coupling and the guide, and a further connection through holes drilled into the coupling. This would be overkill, and either solution is superfluous when coupled with the other, even were it possible, which is doubtful.

In addition to the lack of analogy between Bair and Beurer, Bair also teaches away from Beurer. Bair's coupling is solid, as shown in Figs. 1 and 5, whereas Beurer teaches two tubing

ends, both hollow, inserted one inside the other, as shown in Figs. 1 and 3. Bair teaches and also claims tongue and groove connections between the guide and the coupling, and is very specific at Col.2, lines 50-56 and Col. 3, lines 22-23, that the grooves must not go beyond a specific depth so that "coupling tension strength is not adversely reduced". As noted in *In re Gordon*, 733 F.2d 900 at 902, "The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification".

The applicant submits that the prior art teaches the lack of desirability of modifying Bair as suggested by the examiner, a modification the applicant doubts is possible according to what is taught by Beurer,. Having concern that two grooves could reduce tensile strength if allowed to go beyond a certain depth, it seems unlikely that one skilled in the art looking at Bair would consider it desirable to hollow out the rod coupling, seemingly to reduce tensile strength all the more, particularly where the embodiment as shown in Fig. 5 and disclosed in Col. 3, lines 7-22 is concerned.

The Bair and Beurer references are non-analogous, their combination lacks motivation, they teach away from each other, and they cannot be combined into anything that is workable or desirable. Therefore, the rejection of claims 1, 2, and 4-11 based on their combination must be set aside.

III. The Rejection of Claims 3 and 12 Based on Bair in View of Beurer and Further in View of Edge

As has been previously noted, the combination of Bair with Beurer is unmotivated and completely erroneous. To reject claims 3 and 12 based on their further combination with Edge is therefore also completely erroneous. However, for much the same reasons as those described above, Bair and Beurer not only would not be combined with Edge but cannot be combined with Edge.

There is first of all a complete lack of analogy between mounting a rod guide, forming a leakproof connection, and producing inlaid work. Edge was seeking to develop a quicker, easier, and more inexpensive way to produce inlaid work. The examiner has failed to provide any reasonable explanation why anyone in the field of the applicant's endeavor would look to the art of inlaid work to solve the problem before him. The "reality of the circumstances" have been completely ignored by the examiner. This is the only possible explanation for citing a reference more than a century old from a completely unrelated art.

Furthermore, there is neither any motivation nor suggestion nor possibility of combining the references as suggested by the examiner. Bair teaches a solid coupling section. It would be impossible to have knobs form in Bair alone because there is nowhere for them to form. Beurer, as disclosed at Col. 2, lines 15-20, has material pass through holes 18, but this material fills the annular space between the outer surface of tube 10 and the inner surface of tube 12, as shown in Figs. 2 and 3. Beurer's encapsulating block 20 also has no ability to form knobs, and any such knobs would be

detrimental to preventing "separation of the connection in service" (col. 2, line 23) and forming the leakproof connection desired. It seems remarkable that two references, neither of which permit the formation of knobs, can somehow when combined allow the very thing that was impossible for either alone, and thus be combined with Edge.

By combining references completely lacking in analogy and any motivation or teaching to combine, the examiner has failed to make a *prima facie* case of obviousness to reject claims 3 and 12. Because of the examiner's failure, the rejection of claims 3 and 12 must also be set aside.

12. CONCLUSION

For these reasons, it is submitted that the examiner has failed to establish a *prima facie* case of obviousness, and hence has erred with respect to his rejection of all of the claims on appeal. It is therefore submitted that the claims on appeal are in condition for allowance, and that the rejection should be reversed.

Respectfully submitted



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APPENDIX TO APPEAL BRIEF FILED UNDER 37 CFR 1.192

IN APPLICATION SN 09/769,405 FILED JANUARY 26, 2001

1. A rod coupling, comprising:
a tubular housing having a first end adapted for threaded connection to a rod in a downhole rod string and a second end adapted for threaded connection to a rod in a downhole rod string, the tubular housing having an interior surface defining a bore extending along the tubular housing from the first end to the second end, the tubular housing having an exterior surface;
plural openings extending transversely through the housing from the interior surface to the exterior surface; and
a coating on the exterior surface of the tubular housing and covering the plural openings.
2. The rod coupling of claim 1 in which the coating extends into the openings.
3. The rod coupling of claim 1 in which the coating extends through the openings to form knobs inside the tubular housing.
4. The rod coupling of claim 1 in which the openings taper from the exterior surface towards the interior surface.
5. The rod coupling of claim 1 in which the openings are distributed uniformly around the tubular housing.
6. The rod coupling of claim 1 in which the openings are distributed in plural rows.
7. A rod string formed of plural rods connected by plural rod couplings, each rod coupling comprising:

a tubular housing having a first end adapted for threaded connection to a rod in a downhole rod string and a second end adapted for threaded connection to a rod in a downhole rod string, the tubular housing having an interior surface defining a bore extending along the tubular housing from the first end to the second end, the tubular housing having an exterior surface;

plural openings extending transversely through the housing from the interior surface to the exterior surface; and

a coating on the exterior surface of the tubular housing and covering the plural openings.

8. The rod string of claim 7 in which the openings taper from the exterior surface towards the interior surface.

9. The rod string of claim 7 in which the openings are distributed uniformly around the tubular housing.

10. The rod string of claim 7 in which the openings are distributed in plural rows.

11. The rod string of claim 7 in which the coating extends into the openings.

12. The rod string of claim 7 in which the coating extends through the openings to form knobs inside the tubular housing.